

Notice of Allowability

Application No.

10/071,579

Examiner

Vitali Korobov

Applicant(s)

MCLAUGHLIN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 02/08/2004.
2. ☒ The allowed claim(s) is/are 1,4-15 and 18-20, renumbered as 1-16.
3. ☒ The drawings filed on 29 April 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 08/15/2002
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 06/09/2005.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

SALEH NAJJAR
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Applicant's Representative Mr. Gerald Laws (Reg. No. 39,268) on June 8, 2005.

3. The application has been amended as follows:

IN THE CLAIMS:

Claim 1. (Currently Amended) A networked computing system comprising:

A)a) a network resource that is to be maintained;

B)b) a lock data area indicating an ownership status of the network resource;

C)c) a lock server process for maintaining the lock data area;

D)d) a plurality of clients that are to perform maintenance on the network resource, a client being operative to:

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i) send a command to the lock server process to modify the lock data area to indicate ownership of the network resource by the client;

ii) receive a response from the lock server process indicating whether or not ownership of the network resource by the client is indicated by the lock data area;

iii) perform maintenance on the network resource only if ownership of the network resource is indicated by the lock data area;

iv) if the response indicates that ownership of the network resource by the client is not indicated by the lock data area, the client is operative to:

a) set a retry interval timer; and

b) upon expiry of the retry interval timer, send a further command to the lock server process to modify the lock data area to indicate ownership of the network resource by the client; and

v) after at least two unsuccessful attempts to modify the lock data area to indicate ownership of the network resource by the client, the client is operative to:

a) determine, from lock owner viability data received from the lock server process, whether or not a current lock owner is viable; and

b) if the current lock owner is not viable, send a command that is configured to establish the client as the lock owner notwithstanding that the client is not the current lock owner.

Claims 2-3 (Cancelled)

Claim 13 line 1 "claim 1" has been replaced with **--claim 3--**.

Claim 15. (Currently Amended) A client process for maintaining a network resource, authorization to maintain the network resource being indicated by the contents of a lock data area stored on the network resource, the client process being configured to:

send a first request to modify the lock data area to indicate that the client process is authorized to maintain the network resource;

receive a first response indicating whether or not the client process has successfully modified the lock data area to indicate that the client process is authorized to maintain the network resource; and

send maintenance commands to the network resource only if the first response indicates successful modification of the lock data area;

wherein the client process is further configured to:

set a first retry interval timer if the first response indicates that the client process has not successfully modified the lock data area to indicate that the client process is authorized to maintain the network resource;

after the first retry interval timer expires, send a second request to modify the lock data area to indicate that the client process is authorized to maintain the network resource;

receive a second response indicating whether or not the client process has successfully modified the lock data area to indicate that the client process is authorized to maintain the network resource; and

send maintenance commands to the network resource only if the second response indicates successful modification of the lock data area;

wherein the first response includes first viability data and the second response includes second viability data, the client process being configured to:
compare the first viability data with the second viability data;
based on the comparison, either set a second retry interval timer or send a third request to modify the lock data area, the third request being configured to ensure that the lock data area will be modified to indicate that the client process is authorized to maintain the network resource;
receive a third response indicating whether or not the client process has successfully modified the lock data area to indicate that the client process is authorized to maintain the network resource; and
send maintenance commands to the network resource only if the third response indicates successful modification of the lock data area.

Claim 19 line 1 "claim 17" has been replaced with --claim 15--.

Claim 20 line 1 "claim 16" has been replaced with --claim 15--.

Claims 21-30 (Cancelled).

REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance:

Claims 1, 4-15, 18-20 are allowable over the prior art of record.

The Examiner has found that the prior art of record does not appear to teach or suggest or render obvious the claimed limitations in combination with the specific added limitations as recited in independent claims and subsequent dependent claims.

One such prior art of record, a U.S. Patent 5,734,909 to Bennett, teaches a method for handling contention for a network resource wherein the same process that frees a resource is utilized to respond to queued requests for that resource from other clients. Second such prior art of record, U.S. Patent 6,215,703 to Bogin et al., discloses a method for handling contentions that might arise while several processes try to access a memory resource, wherein said contention is resolved based on a priority classification assigned to a contending request as compared to priority of a request that currently has control of the resource. Third prior art of record, U.S. Patent 6,516,351 to Borr, discloses a method whereby a file server determines, before allowing any client device to access a data resource or to obtain a lock on a resource, whether that would be inconsistent with existing locks, regardless of originating client device or originating protocol for those existing locks, and regardless of whether the existing lock is viable, as disclosed by the instant application.

In Summary, the prior art of record fails to teach or suggest a networked computing system and a client process wherein the determination to grant access to a resource, in the presence of contention for the resource from network clients, is based upon the outcome of determination whether the existing lock on the resource is viable, as defined by the teachings of the instant application, after a predetermined number of unsuccessful attempts to gain exclusive control over the resource ("take ownership" or "place a lock" on the resource).

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5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance and Examiner's Amendment."

ADDITIONAL REFERENCES

6. The Examiner, as of general interest, sites the following references:

- 1) U. S. Patent 5,117,352 to Falek.
- 2) U. S. Patent 5,630,136 to Davidson et al.
- 3) U. S. Patent 5,537,645 to Henson et al.
- 4) U. S. Patent 6,772,162 to Waldo et al.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vitali Korobov whose telephone number is 571-272-7506. The examiner can normally be reached on Mon-Friday 8a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vitali Korobov
Examiner
Art Unit 2155

VAK
06/10/2005



SALEH NAJJAR
PRIMARY EXAMINER